

3 in response to detecting the request, determining whether said action is authorized
4 based on [an association between] permissions [and] associated with a
5 plurality of routines in a calling hierarchy associated with said principal.

1 2. (Not Amended) The method of Claim 1, wherein:
2 the step of detecting when a request for an action is made includes detecting when a
3 request for an action is made by a thread; and
4 the step of determining whether said action is authorized includes determining
5 whether said action is authorized based on an association between permissions
6 and a plurality of routines in a calling hierarchy associated with said thread.

1 3. (Not Amended) The method of Claim 1, wherein:
2 the calling hierarchy includes a first routine; and
3 the step of determining whether said action is authorized further includes determining
4 whether a permission required to perform said action is encompassed by at
5 least one permission associated with said first routine.

1 4. (Amended) The method of Claim 3, wherein said [association between] permissions
2 [and] are associated with said plurality of routines [is] based on a first association
3 ~~between protection domains and permissions.~~

1 5. (Amended) A method for providing security, the method comprising the steps of:
2 detecting when a request for an action is made by a principal;
3 determining whether said action is authorized based on an association between
4 permissions and a plurality of routines in a calling hierarchy associated with
5 said principal;

6 [The method of Claim 4, wherein:]
7 wherein each routine of said plurality of routines is associated with a class; and
8 wherein said association between permissions and said plurality of routines is based
9 on a second association between classes and protection domains.

1 6. (Not Amended) The method of Claim 1, wherein the step of determining whether
2 said action is authorized further includes determining whether a permission required
3 to perform said action is encompassed by at least one permission associated with each
4 routine in said calling hierarchy.

1 7. (Amended) The method of Claim 1, wherein:
2 a first routine in said calling hierarchy is privileged; and
3 wherein the step of determining whether said action is authorized further includes
4 determining whether a permission required to perform said action is
5 encompassed by at least one permission associated with each routine in said
6 calling hierarchy between and including said first routine and a second routine
7 in said calling hierarchy, wherein said second routine is invoked after said first
8 routine, wherein said second routine is a routine for performing said requested
9 action.

1 8. (Not Amended) The method of Claim 7, wherein the step of determining whether
2 said permission required to perform said action is encompassed by at least one
3 permission associated with each routine in said calling hierarchy between and
4 including said first routine and said second routine further includes the steps of:
5 determining whether said permission required is encompassed by at least one
6 permission associated with said second routine; and

7 in response to determining said permission required is encompassed by at least one
8 permission associated with said second routine, then performing the steps of:

9 A) selecting a next routine from said plurality of routines in said calling
10 hierarchy,

11 B) if said permission required is not encompassed by at least one permission
12 associated with said next routine, then transmitting a message
13 indicating that said permission required is not authorized, and

14 C) repeating steps A and B until:

15 said permission required is not authorized by at least one permission
16 associated with said next routine,

17 there are no more routines to select from said plurality of routines in
18 said calling hierarchy, or

19 determining that said next routine is said first routine.

1 9. (Not Amended) The method of Claim 8, wherein:

2 the method further includes the step of setting a flag associated with said first routine
3 to indicate that said first routine is privileged; and

4 the step of determining that said next routine is said first routine includes determining
5 that a flag associated with said next routine indicates said next routine is
6 privileged.

1 10. (Not Amended) The method of Claim 9, wherein the step of setting said flag
2 associated with said first routine includes setting a flag in a frame in said calling
3 hierarchy associated with said thread.

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1 11. (Amended) A computer-readable medium carrying one or more sequences of one or
2 more instructions, [wherein the execution of] the one or more sequences of the one or
3 more instructions including instructions which, when executed by one or more
4 processors, causes the one or more processors to perform the steps of:
5 detecting when a request for an action is made by a principal; and
6 in response to detecting the request, determining whether said action is authorized
7 based on [an association between] permissions [and] associated with a
8 plurality of routines in a calling hierarchy associated with said principal.

1 12. (Not Amended) The computer-readable medium of Claim 11, wherein:
2 the step of detecting when a request for an action is made includes detecting when a
3 request for an action is made by a thread; and
4 the step of determining whether said action is authorized includes determining
5 whether said action is authorized based on an association between permissions
6 and a plurality of routines in a calling hierarchy associated with said thread.

1 13. (Not Amended) The computer readable medium of Claim 11, wherein:
2 the calling hierarchy includes a first routine; and
3 the step of determining whether said action is authorized further includes determining
4 whether a permission required to perform said action is encompassed by at
5 least one permission associated with said first routine.

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1 14. (Amended) The computer-readable medium of Claim 11, wherein said [association
2 between] permissions [and] are associated with said plurality of routines [is] based on
3 a first association between protection domains and permissions.

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15. (Amended) A computer-readable medium bearing instructions for providing security,
2 the instructions including instructions for performing the steps of:
3 detecting when a request for an action is made by a principal;
4 determining whether said action is authorized based on an association between
5 permissions and a plurality of routines in a calling hierarchy associated with
6 said principal;
7 [The computer-readable medium of Claim 11, wherein:]
8 wherein each routine of said plurality of routines is associated with a class;
9 and
10 wherein said association between permissions and said plurality of routines is
11 based on a second association between classes and protection domains.

1 16. (Not Amended) The computer readable medium of Claim 11, wherein the step of
2 determining whether said action is authorized further includes determining whether a
3 permission required to perform said action is encompassed by at least one permission
4 associated with each routine in said calling hierarchy.

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1 17. (Amended) The computer readable medium of Claim 11, wherein:
2 a first routine in said calling hierarchy is privileged; and
3 wherein the step of determining whether said action is authorized further includes
4 determining whether a permission required to perform said action is
5 encompassed by at least one permission associated with each routine in said
6 calling hierarchy between and including said first routine and a second routine
7 in said calling hierarchy, wherein said second routine is invoked after said first
8 routine, wherein said second routine is a routine for performing said requested
9 action.

1 18. (Not Amended) The computer readable medium of Claim 17, wherein the step of
2 determining whether said permission required to perform said action is encompassed
3 by at least one permission associated with each routine in said calling hierarchy
4 between and including said first routine and said second routine further includes the
5 steps of:
6 determining whether said permission required is encompassed by at least one
7 permission associated with said second routine; and
8 in response to determining said permission required is encompassed by at least one
9 permission associated with said second routine, then performing the steps of:
10 A) selecting a next routine from said plurality of routines in said calling
11 hierarchy,
12 B) if said permission required is not encompassed by at least one permission
13 associated with said next routine, then transmitting a message
14 indicating that said permission required is not authorized, and
15 C) repeating steps A and B until:
16 said permission required is not authorized by at least one permission
17 associated with said next routine,
18 there are no more routines to select from said plurality of routines in
19 said calling hierarchy, or
20 determining that said next routine is said first routine.

1 19. (Not Amended) The computer readable medium of Claim 18, wherein:
2 the computer readable medium further comprises one or more instructions for
3 performing the step of setting a flag associated with said first routine to
4 indicate that said first routine is privileged; and
5 the step of determining that said next routine is said first routine includes determining
6 that a flag associated with said next routine indicates said next routine is
7 privileged.

1 20. (Not Amended) The computer readable medium of Claim 19, wherein the step of
2 setting said flag associated with said first routine includes setting a flag in a frame in
3 said calling hierarchy associated with said thread.

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1 21. (Amended) A computer system comprising:
2 a processor;
3 a memory coupled to said processor;
4 said processor being configured to detect when a request for an action is made by a
5 principal; and
6 said processor being configured to respond to detecting the request by determining
7 [determine] whether said action is authorized based on [an association
8 between] permissions [and] associated with a plurality of routines in a calling
9 hierarchy associated with said principal.

1 ²⁰~~22~~. (Amended) The computer system of Claim ¹⁹~~21~~, [wherein] wherein:
2 the calling hierarchy includes a first routine; and

3 said processor is configured to determine whether said action is authorized by
4 determining whether a permission required to perform said action is
5 encompassed by at least one permission associated with said first routine.

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1 ~~21~~¹⁹ (Amended) The computer system of Claim ~~21~~¹⁹, wherein
2 said processor is configured to determine whether said action is authorized by
3 determining whether a permission required to perform said action is
4 encompassed by at least one permission associated with each routine in said
5 calling hierarchy.

REMARKS

The Examiner is thanked for the performance of a thorough search.

By this amendment, Claims 1, 4, 5, 7, 11, 14, 15, 17 and 21-23 have been amended.

No claims have been added or cancelled. Hence, Claims 1-23 are pending in the application.

As a preliminary matter, receipt of the Notice of Draftsperson's Patent Drawing Review is acknowledged. Applicant recognizes that the present drawings are acceptable for examination purposes only. Formal drawings will be submitted after completion of the examination process upon the issuance of a Notice of Allowance.

SUMMARY OF THE REJECTIONS/OBJECTIONS

Claims 11 and 22 are objected to on the grounds that they contain limitations that lack antecedent basis. In response, Claims 11 and 22 have been amended. It is respectfully submitted that Claims 11 and 22 as amended do not contain any limitation that lacks antecedent basis. Withdrawal of these objections is respectfully requested.